

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2018 / 2019

TSD2241 – INFORMATION SYSTEMS DEVELOPMENT

1 MARCH 2019
3.00 p.m. - 5.00 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 5 printed pages including the cover page.
2. Attempt **ALL** questions.
3. The distribution of the marks for each question is given.
4. Please write all your answers clearly in the answer booklet provided.

Answer ALL questions.

QUESTION 1 (10 MARKS)

- a) Each central processing unit (CPU) consists of **THREE** associated elements, i.e., the arithmetic/logic unit (ALU), the control unit, and the register areas. Briefly describe the function of each element. (3 marks)
- b) Systems development involves creating or modifying existing business systems. Illustrate an overview of systems development and explain any **TWO** major steps of this process. (3 marks)
- c) System cutover is switching from an old information system to a replacement system. Cutover can be critical to the success of the organization because the results can be disastrous if it is not done properly. Assume that you are the Chief Information Officer (CIO) of a manufacturing company with many retail outlets throughout Malaysia, organize an appropriate system cutover strategy to implement a new inventory control system to all the retail outlets. Explain the rationale of choosing such strategy. (4 marks)

QUESTION 2 (10 MARKS)

a)

Alibaba expands cloud computing business to the UK

by Hasan Chowdhury 22 October 2018

Alibaba Group's cloud computing arm has launched its first data centres in the UK, as the Chinese company forges ahead with an ambitious international expansion plan in Europe.

Alibaba Cloud, which was founded in 2009, will host two operational sites in London, adding to the Chinese conglomerate's existing data centres in Frankfurt and Dubai across Europe and the Middle East.

Alibaba says the new centres will allow the company to offer business customers new cloud computing services, enabling it to better compete with US rivals Amazon Web Services and Microsoft Azure.

"Our expansion into the United Kingdom, and by extension into Europe, is in direct response to the rapidly increasing demands we have seen for local facilities within the region," said Yeming Wang, general manager of Alibaba Cloud's EMEA operations.

With the addition of Alibaba Cloud's latest facilities, the division now operates in 19 different regions and has further plans for global expansion.

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“Using AI-powered and data-driven technology, our latest data centres will offer customers complete access to our wide range of cloud services from machine learning capabilities to predictive data analytics.”

Alibaba Cloud is the largest provider of public cloud services in China, according to market intelligence firm International Data Corporation.

Alibaba will face stiff competition in the UK from the likes of Amazon, whose Amazon Web Services division, along with its research and corporate branches, will employ more than 6500 people. The Silicon Valley giant has invested more than £9.3bn in the UK since 2010.

Earlier this month, Amazon announced that it would be investing in three regional hubs across the UK, leading to the creation of 1000 new jobs.

The Chinese giant’s cloud computing offering is among the world’s top three providers of digital infrastructure.

The London facilities are said to involve real-time monitoring for security and will offer a number of Alibaba Cloud’s products such as "elastic computing", a feature which can boost or reduce computing power based on client needs.

Source: <https://www.telegraph.co.uk/technology/2018/10/22/alibaba-expands-cloud-computing-business-uk/>

- i. What is cloud computing? (1 mark)
- ii. Briefly explain **TWO** pros and **TWO** cons of cloud computing. (2 marks)
- iii. How would the predictive data analytics offered by Alibaba Cloud be used by a marketing manager? (3 marks)

b)

Zalora: One of the biggest eCommerce Start-ups in Asia

by Chris Osborne, 17 September 2018

Founded in 2012 by Rocket Internet, Zalora is an online fashion store aimed at customers in Singapore, Malaysia, Indonesia, the Philippines and other Southeast Asian markets. It also operates in Hong Kong and Taiwan.

One of Southeast Asia’s most established ecommerce start-ups, Zalora has gained investment from conventional retailers in many of its key markets, including Thailand’s Central Group and the Ayala Corporation of the Philippines.

Source: <https://kintu.co/ecommerce-asia/>

If you are a Web designer, plan **FOUR** ways for Zalora to build traffic to its website.

(4 marks)

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QUESTION 3 (10 MARKS)

- a) Wireless transmission involves the broadcast of communications in different frequency ranges, i.e., radio, microwave, or infrared. Compare and contrast these frequency ranges. (3 marks)
- b) Organizations today, especially SMEs, typically implement an integrated set Transaction Processing Systems (TPSs) to meet their transaction processing needs. If Batik Boutique is a new clothing-retail shop known for its batik fashion for men, women, teenagers and children, discover what TPS can offer to Batik Boutique in terms of cost, inventory, customer royalty and relationship with suppliers. (4 marks)
- c)

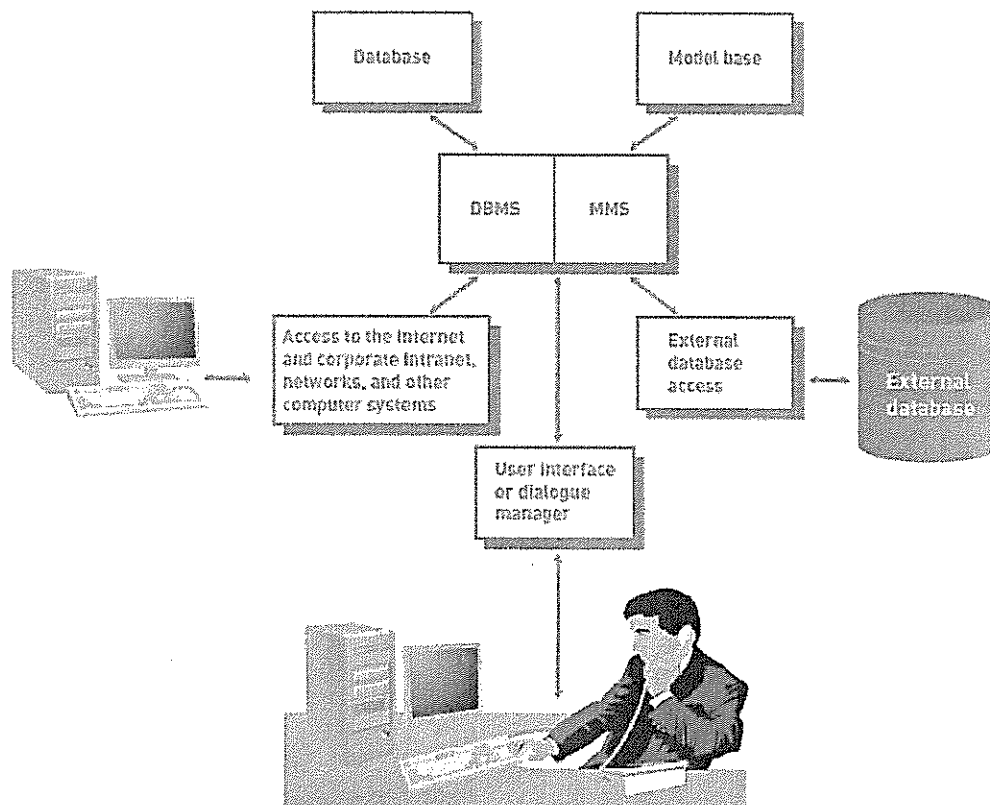


Figure 1

Figure 1 shows the conceptual model of a Decision Support System (DSS). At the core of a DSS are a database and a model base with a user interface called a dialogue manager. Briefly explain these core DSS components. (3 marks)

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QUESTION 4 (10 MARKS)

- a) Artificial intelligence is a broad field that includes several key components such as robotics and natural language processing.
- i) Briefly explain these two components. (2 marks)
 - ii) Give an example of use in our daily life for each of these components. (2 marks)
- b) A major step of the systems investigation phase is feasibility analysis. Briefly explain technical, economic, legal, and operational feasibility. (4 marks)
- c) Briefly explain **TWO** advantages of solid state secondary storage devices compared to magnetic secondary storage devices. (2 marks)

QUESTION 5 (10 MARKS)

- a) A competitive advantage is a significant and ideally long-term benefit to a company over its competition in which it can provide higher-quality products and better customer service with lower costs. Explain **THREE** general strategies employed by organizations to achieve competitive advantage. (3 marks)
- b) Database size and cost are two important characteristics of databases. If you were hired to set up a database for a transportation company, discover any other **THREE** important characteristics of databases to be considered. (3 marks)
- c) Explain the term green computing and **THREE** of its primary goals. (4 marks)

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